

THE BLACK-THROATED GREEN WARBLER.

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Plates XIII and XIV.

THE Black-throated Green Warbler is the light opera of the birds. When he is in the treetops I find myself unconsciously humming the words that suggest his two common ditties, they are so marked in time and catchy. His voice is suggestive of the drowsy summer days, the languor of the breeze dreamily swaying the pines, spruces, firs and hemlocks. It recalls the incense of evergreens, the fragrance of the wild strawberry, the delicate perfume of the linnea. No other bird voice is so potent to evoke that particular spell of the northern woods.

At Ellsworth, Maine, the Black-throated Green Warbler is one of the early warblers to arrive in the spring. It comes just as the buds of the larch are opening, and is always to be looked for in or near swamp growths, where gray birch, larch, and evergreens flourish. After the nest is completed, there is a long period of nearly two months when the song of the Black-throated Green and Magnolia Warblers can be heard at any time of the day in the high tops of primeval spruces and pines. In the early part of the season the Black-throated Green Warbler feeds all over any kind of tree but prefers deciduous; in the fall they frequent these same growths, where the swamps at this season are often dry. At this time of year, they sometimes descend to the ground and forage among the newly fallen leaves.

The bird is quick in its movements, but often spends periods of some length on one tree, frequently coming down low to peep inquisitively at an observer, once in a while flying toward a person as if to alight on his hand or head. This mark of curiosity is shown by both the Magnolia and the Black-throated Green, particularly during migration.

Two common songs of the Black-throated Green Warbler are easily suggested by words; a third, less common, is not so easily reduced to syllables. The first is always readily recalled by the words *read-y, stead-y, read-y, stead-y*. The second, by the words *sweet, O, how sweet, sweet, sweet, O how sweet*; or again, *take it,*

take it, lei-sure-ly; take it, take it, lei-sure-ly. What I speak of as the third song, I have heard only in one locality as if sung by but one bird. At different times I have translated it in three syllables, *chce, chce, chce, read-y; te, te, ti, de-ce;* or *sui, sui, sui, su-i.* By some each translation might be regarded as a separate song.

It was in the twilight that I came upon the beautiful, fragile little nest of the Black-throated Green Warbler for the first time. On hasty inspection it looked like a mass of moss. A closer investigation showed the suggestive moss-like mass to be a nest, shaped almost as gracefully as a Tiffany vase. It was located on the border of a swamp, in the vertical crotch of a hemlock, about six feet from the ground. I could just touch the eggs with the tips of my fingers. To see them, I had to climb the neighboring tree.

There were three eggs in the nest, creamy-white, minutely speckled all over with reddish brown dots, and ringed with reddish-brown around the larger end. On one of the eggs the spots were confluent. The eggs were small and broad like the Magnolia Warbler's.

The nest was well set down into the crotch of a branch. It could be lifted out of the support very easily as it was not attached to any of the twigs. The sides were deeply grooved by the surrounding stems, the material bunching out between them. The foundation of the structure was spruce twigs, cedar bark fibre, spider's silk, cord, thin strips of white birch bark, and roots; the lining consisted of cedar bark fibre, roots and hay. One might almost say the material was miscellaneous. The nest was so fragile that the light shone through the walls in many places. The hemlock foliage well concealed the tiny abode from any but an inquisitive observer.

June 19 (1907), there were four eggs in the nest, and the bird was sitting. I walked back and forth under the tree and talked to her for some time before she would abandon her charge. As I climbed the next tree for a peep at the eggs, the bird scolded me somewhat and acted a little as if she were going to fly at me. She alighted within three feet of where I was sitting. I slipped down out of the tree and sat a yard or so away, and the bird returned to her duties again immediately.

On the fourth day when I visited the neighboring tree, the little bird flew to a branch within a foot of my face, not showing the least alarm. While she was perched beside me, I could not resist talking to her. The little creature chirped softly as if to say, "I don't like to have you here, but since you are, did you ever see such a lovely nest, and such beautiful eggs?"

In twelve days, on July 1, the beautiful little mother had completed the task of incubation. A few seconds after I appeared under the tree, the bird fell from the nest heavily to the ground, like a dead weight. She acted as if she were lame, and her wing broken. In this way she crept along some ten or fifteen feet. As I turned to get down out of the tree, I saw her on the ground, apparently helpless; when I reached the foot of the tree, she was in the branches looking most deliberately for food. When the female was feigning helplessness, her colors seemed much brighter than usual. She looked like an emerald set in gold, a winged gem.

On the third day the young birds were growing rapidly, burnt-orange in color, covered with an abundant supply of burnt-umber down. The quills and pin feathers showed blue-gray through the skin, and the eyes were just beginning to open.

On the seventh day the nestlings were large and well covered with grayish olive brown feathers on the back. They had buffy wing bars and were grayish-yellow-white underneath. Both birds scolded me severely, particularly the male bird. The female came very close and looked at me a great deal. Finally she dropped to a branch where she fluttered with an apparently broken wing, dropped helplessly to the ground, crawled along with seeming difficulty, but finally succeeded in dragging herself up onto a log. It was almost as if she said, "If you must take some one, take me." The birds chirped piteously until I left the neighborhood.

The eighth day the Black-throated Green Warblers were still in the nest, but when we attempted to arrange them slightly for a photograph, they all spilled over the side. We found three and put them back into the nest. During all this time the parent birds lingered around, sometimes scolding. Again the female clung to a branch with disabled wing. The moment we left the nest, the old birds returned to minister to the young. Tempting moths and caterpillars were thrust down their hungry little throats.

In the afternoon I returned and found the fourth fledgling perched on a flat rock in the sun. I attempted to return it to the nest, but just as it touched the side it gave a loud chirp that frightened the nestlings and the parent birds. The young dropped from the nest into the dry beech leaves and dwarf cornel foliage; the old birds were in a perfect frenzy. The mother bird poised herself in the air between me and the young and chirped in great distress. I decided to go at once without trying to explain my good intentions further.

The liquid prattle of young birds in the trees attracted me the next morning. Moving cautiously in that direction, I was startled by the loud scolding notes of the Black-throated Green Warbler. There was not the slightest doubt that the bird recognized me as her enemy of the day before. The little warblers were safe, and apparently very hungry, in the treetops.

May 25, 1908, I found two Black-throated Green Warblers building in the swamp. They were gathering bits of fine grass when I first noticed them, and flew to the fir where they were beginning a nest, rather reluctantly depositing the bits of hay with that foolish look birds assume when caught near the nest. First they laid knots of spider's silk and little curls of white birch bark in the shape of the nest, on the horizontal fork about midway of a branch six feet long. Next bits of fine grass, a little usnea moss, and cedar bark fibre. Both the male and female worked on the nest, until observed, the female shaping it with the breast each time they added a bit of material. Around the top were carefully laid the finest gray spruce twigs. These were bound together with masses of fine white spider's silk. The white curls of birch bark, the much weathered twigs, the fluffy shining bands and knots of spider's silk, made a very dainty looking structure. After the first morning, I did not see the male about the nest. As a general thing, I find that, if birds are observed building, the male usually leaves his part of the work to the female. The lady bird continued to shape the nest with her breast, turning around and around, as if swinging on a central pivot, just her beak and tail showing above the rim. If I came too near, she stood up in the nest as if to fly. If I withdrew to a respectful distance, say three yards, she went on with her work of shaping the nest. On

the second day the rim of the nest seemed about completed. It was narrower than the rest of the cup and beautifully turned. Nothing to speak of had been done to the bottom. On the fourth day, by touching the inside of the nest with the tips of my fingers, I judged that the lining was about finished. It consisted of rabbit-hair and horse-hair, felted or woven together so as to be very thick and firm. Between the foundation of twigs and bark and the hair lining was a layer of fine hay of which the mouth of the nest was chiefly shaped. I never saw a more substantial looking little nest. It was also one of the most beautiful I have ever found, a perfect harmony in grays.

After the fourth day I never surprised the birds in the vicinity of the nest. I began to fear that they had deserted. It was not until the 6th of June that I found the first egg. The four eggs were laid on four consecutive days, before 9 A. M., and the bird began to incubate before 10.30 A. M. of the fourth day. By standing on a rock under the tree, and pulling the branch down slightly, I could just see the eggs. I went often to the nest during the twelve days the female was incubating. When I put my face almost against the nest and talked to her, she simply turned her head and looked at me, and chipped two or three times very gently. She would leave the eggs only when I put up my hand as if to touch her.

On the fourth day the eyes of the nestlings were open a narrow slit; the wing quills were one half inch long; the pin feathers were indicated on the feather tracts; and the whole bird had taken on a more or less dark-brown leathery appearance.

On the sixth day I remained a long time near the nest. The parent birds came with food. The male called *sint, sint* in a sharp metallic tone all the time I was there and refused to feed the young. After a time the female ceased scolding and brought food several times, and carried away excrement. Then she crouched on the side of the nest, holding on by her claws which were thrust firmly into the walls.

On the eighth day, the nest was simply stuffed full of little green-gray birds, strikingly like the color of the nest.

On the tenth day, I pulled the nest almost down to my face to see the wing bars of the nestlings. The old birds chirped a little but were not annoyed.

On the eleventh day, quite early in the morning, as I neared the nesting place, I heard the fledglings calling from the treetops. Soon I caught a glimpse of the Black-throated Green Warblers marshalling their little band away.

The nest measured, inside, $2\frac{1}{4}$ inches in length and $1\frac{3}{4}$ in width; outside, 4 inches in length, 3 in width, and 2 in depth.

The four nests of 1909 were of the two types before mentioned, those built in a crotch or with crotch-like effects, and those sitting on twigs connected with the branch. One was like the dainty gem-like structure of the year before but a bit more dainty, containing much more spider's silk; the bird was four days constructing the foundation, and four days felting together the lining of rabbit-hair, horse-hair and human-hair. She then rested a day before laying the first egg. The other three nests were less exquisitely curved and put together more clumsily; but if one had never seen the work of the gentle artist who executed the first, he would have been charmed with the clever skill of the modellers of the other three.

They were located from four to eight feet up, three in fir trees, one in a spruce. One of the nests of this year contained a fibrous bark other than cedar; two had a few feathers in the lining, and the other was lined with black plant fibre; the rest of the materials were similar to those in the second nest described.